

# Discontinuity in the Latent Structure of the Secure Base Script: Taxometrics Reveal a Representational Shift in Middle Childhood

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# Background

- Attachment Theory (e.g. Bowlby, 1969/1982)
  - Early experience with sensitive care organizes behavioral and cognitive systems
    - Haven of safety
    - Secure base for exploration
  - Secure attachment:
    - Expectation of caregiver availability and responsiveness during distress and exploration
  - Insecure Attachment:
    - Uncertainty in caregiver availability and responsiveness during distress or exploration.

# Background

- Development of Attachment Representations (e.g. Ainsworth et al., 1978/2015; Main et al., 1985; Waters & Waters, 2006; Waters et al., 2017)
  - Sensorimotor
    - Infancy and beyond
  - Cognitive script
    - Childhood and beyond
  - Autobiographical Memory
    - Adolescence and beyond

# Sensorimotor Representation



# Scripted Representation

I: What would your parents do when you were upset?

S: They would **figure out what was wrong** and they'd just **talk to me about it**, they never really did the thing that would in a sense rile me up more, and get me more upset, they would always **calm me down** and try to get what was really going on out, so they could you know **help me look forward**.

# Autobiographical Representation

I: What would you do when you were upset?

S: I'd probably go to my mom

I: What would she do?

S: [She'd comfort me], one time I had um a fist fight when I was younger with one of my best friends. And I don't particularly remember what it was over, but I remember being very, very upset. And...you know, of course, I went to my mother and my mother wanted to call her mother and, you know and..work the whole thing out and, and she did, she called up and, you know, we had all gotten together. But um..you know, I felt..she, she wasn't angry at me that I had this fight, she, you know, felt for me, she really, you know, went outta her way to make, you know, make everything okay.

# Background

- Why study latent structure?
  - Reveals information about how attachment representations are acquired and organized
    - All or nothing fashion?
  - Evaluation of change over time
  - Measurement
    - Statistical power
    - Precision of estimates

# Background

- Taxometric Analyses of Attachment Measures Across the Lifespan
  - Infancy:
    - SSP (Fraley & Spieker, 2003) - Dimensional
  - Adolescence:
    - AAI (Fraley & Roisman, 2014) – Dimensional
    - ASA (Waters et al., 2015) - Dimensional
  - Adulthood:
    - AAI (Roisman, et al., 2007) – Dimensional
    - ASA (Waters et al., 2015) - Dimensional



# Background

- Taxometric Analyses of Attachment Measures Across the Lifespan
  - Infancy: Dimensional
  - Childhood: ???
  - Adolescence: Dimensional
  - Adulthood: Dimensional

# Present Study

- Script are thought to emerge as “all or none” structures
  - Diverse but related experiences cause elaboration
    - Alternate paths
    - Alternate roles
- Address taxometric gap in childhood period
- Examine latent structure of middle childhood version of the Attachment Script Assessment (ASA; Waters et al., 2015)

# Methods

- MC ASA (Waters et al., 2015)
  - Participants complete fictional story telling task using (min.) 3 prompt-word outlines
    - 3 mother-child scenarios
  - Stories rated from 1-7 on secure base script structure and elaboration

# Methods

Taxometric Method (e.g. Meehl & Yonce, 1994; Waller & Meehl, 1998)

- Requirements:
  - Minimum 3 indicators
  - $N > 300$ ; Ideally  $N > 600$
- Procedures
  - MAXCOV
  - MAMBAC
  - L-Mode

# Methods

- Sample
  - Total N = 639
  - 5 Belgium
  - 2 USA
  - Mean Age: 10.5yrs
  - All normative risk
  - 55% female

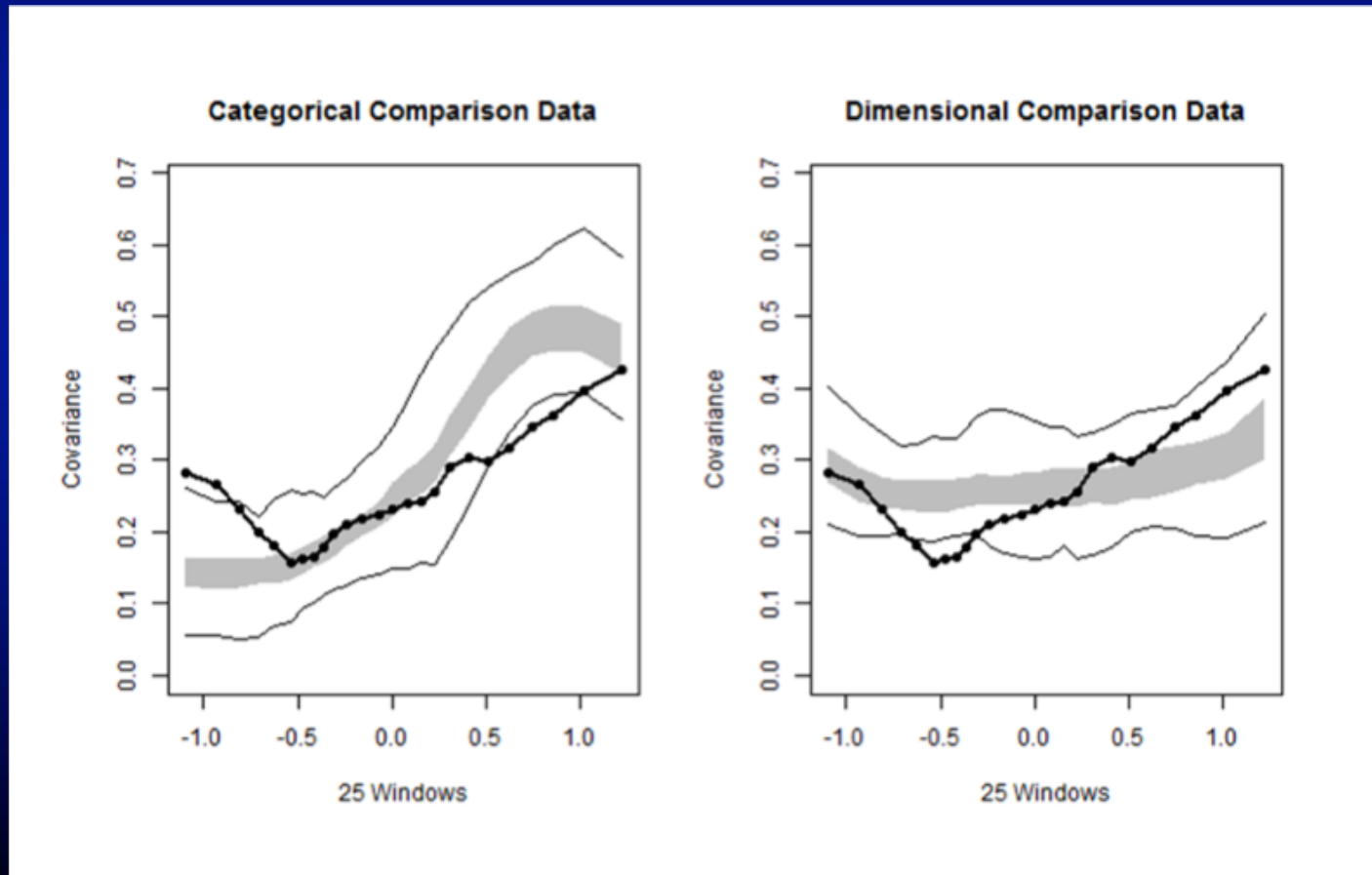
# Methods

Taxometric Method (e.g. Meehl & Yonce, 1994; Waller & Meehl, 1998)

- Analysis (Ruscio et al., 2010)
  - Comparison of observed data with simulated categorical and continuous functions
  - Comparative Curve Fit Index (0-1; CCFI; Ruscio et al., 2010)
    - Measures fit between observed data and categorical v. continuous models
    - $CCFI > .55$  = Categorical
    - $CCFI < .45$  = Continuous
    - CCFI between .45-.55 is ambiguous
    - Mean CCFI computed

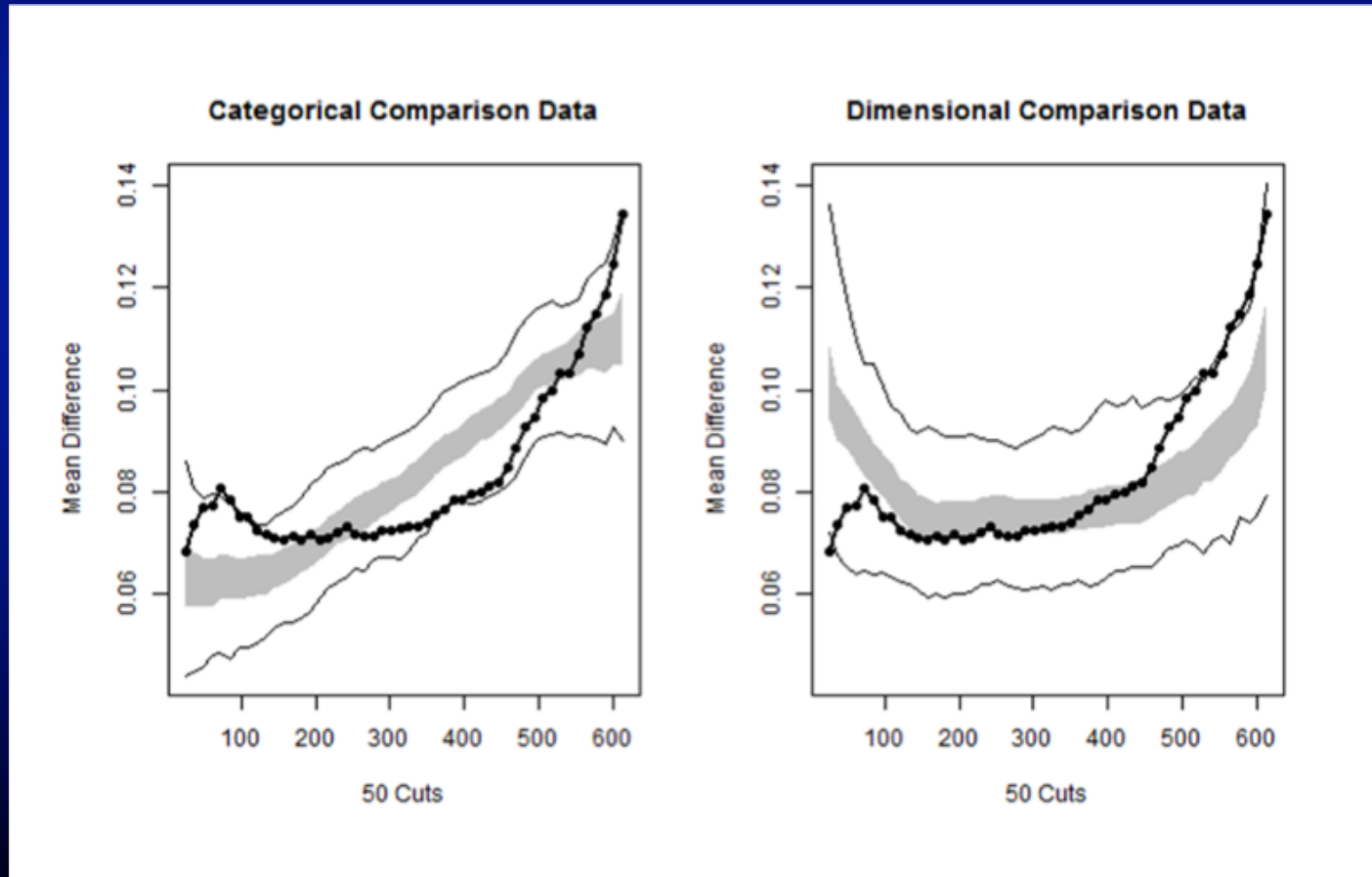
# Results

MAXCOV CCFI: .443



# Results

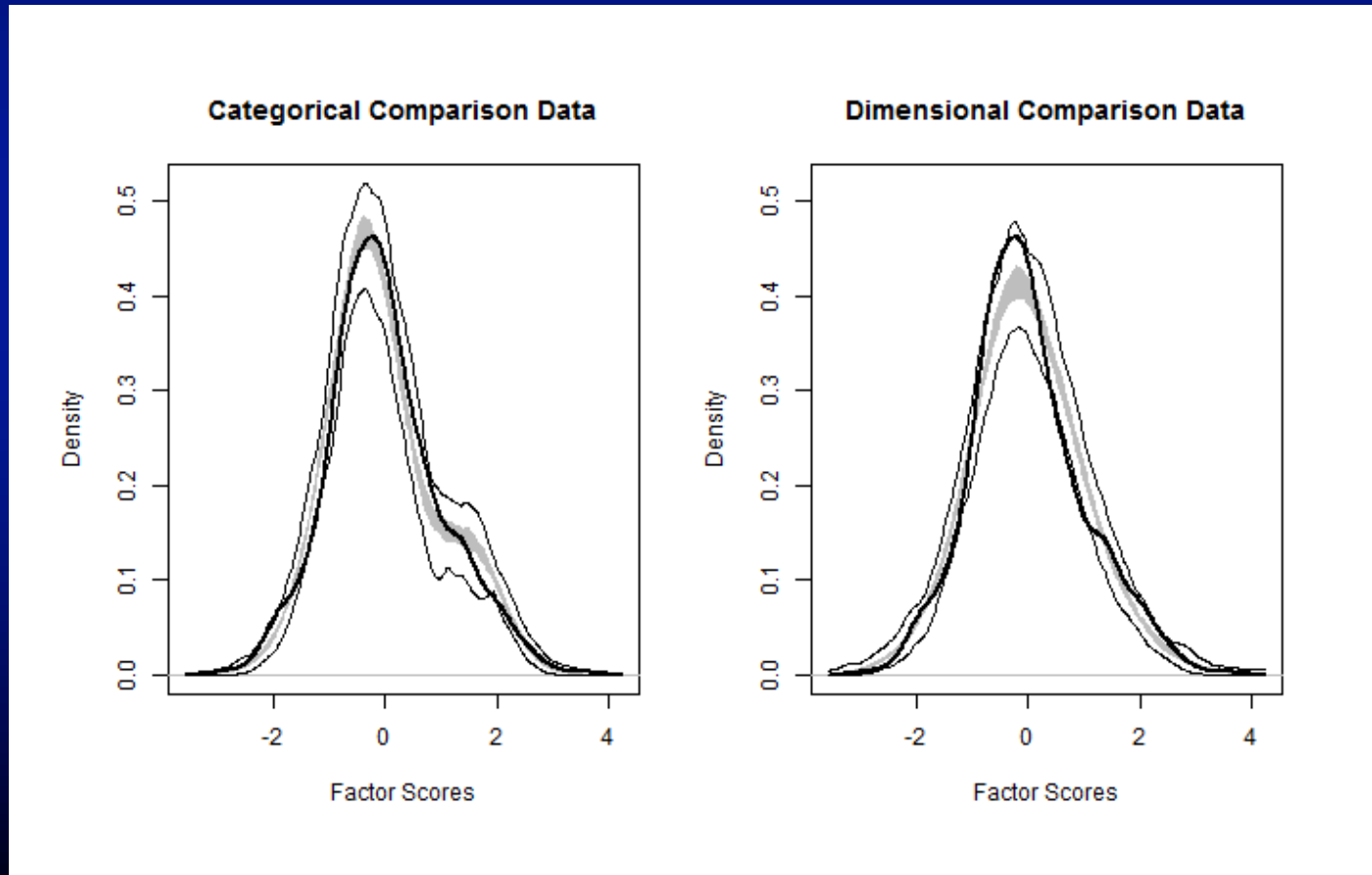
MAMBAC CCFI: .544





# Results

L-Mode CCFI: .703



# Results

- Mean CCFI = .563
- Secure base script in MC appears categorically distributed
  - Secure v. Insecure
- Taxon Base Rate
  - Roughly 25% of children know the secure base script
  - Translates to a cutoff of ~4 and above for security

# Secure Base Script Scale

- 7 There is a rich interplay between the two principle characters. There is a great deal of attention to the psychological state of the other, and the “secure base” is very responsive to that psychological state. Important to the secure base script is the resolution of the problem, provision of comfort, and a return to normalcy.
  - 6 These narratives fall short of the richness of secure base content that is evidenced in stories ranked “7”. Nonetheless, these stories do contain a reasonable amount of secure base content.
  - 5 These narratives have a medium amount of secure base content, but not as much elaboration as those that are ranked “7” or “6”.
  - 4 These narratives have some secure base content, but not very much. Thus, they are weak on secure base content, but there is no unusual or atypical content contained in the story either.
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- 3 These narratives seem mostly event-related stories, in which what is happening is presented, with very little commentary on the give and take between with the characters, or on the psychological content of the story.
  - 2 These are event-related as well, but so brief as to seem disjointed. Also included in this category are narratives that contain some unusual or atypical content that is inconsistent with a secure base script. The intrusion of this content however is not as consistent or pervasive as the narratives that are scored “1.”
  - 1 These narratives are theme-based variations that come across as quite peculiar interpretations of the implied story line. Not only is the secure base script not recognized, but a quite different script is in its place. The narratives can be quite detailed, with content generated consistent with the peculiar interpretation of the story line. These are not that common. Narratives that have significant unusual or atypical content, but fall short of a complete theme-based variation also receive a “1.”

# Discussion

- Why so few children with SBSK?
  - Cognitive ability to generalize across diverse personal experiences only just emerging (e.g. Del Giudice, 2015; Habermas & Bluck, 2000; Habermas, 2011)
  - Still under construction
- Other ways for secure base behaviors to arise in children when script still developing?
  - Exemplars v. prototypes
  - Fall back to sensorimotor representations?

# Discussion

- What might give rise to the shift from category to continuity
  - Script theory: Elaboration of script as diverse but related contexts are encountered
    - Peers
    - Romantic partnership
    - Parenting
- Perhaps other attachment representations also emerge and elaborate in the same way?

# Acknowledgments

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# Thank You



# Questions?

